

8054.010NPUS00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	) <b>BEFORE THE BOARD OF PATENT</b>
Alistair Edwin MAY	) <b>APPEALS AND INTERFERENCES</b>
Serial No. 10/620,811	)
Filed: July 17, 2003	) Appeal No.:
For: DETECTING DEVICE	) Examiner: Stephen G. Sherman
USAGE	)
	) Group Art Unit: 2629
	)
	) June 11, 2007 (Monday)

**REPLY BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is a reply to the new points of argument in the Examiner's Answer dated April 9, 2007.

**ARGUMENT**

**The Rejection of Claims 1-3, 6, 13, 15-17 and 20 Is Improper**

Junod discloses the use of a "hand detection" circuit with an input device such as a mouse, which senses the presence of a user's hand on the mouse by detecting a change in capacitance or inductance of a common antenna also used for transmitting/receiving RF signals. See Fig. 7 and paragraph 0044. Junod fails to anticipate any of claims 1-3, 6, 13, 15-17 or 20, and this ground of rejection therefore should be reversed.

**Junod Does Not Sense a Physical Characteristic of a Radio Channel**

The capacitance or inductance of an antenna is not a physical characteristic of a radio channel, as required by the claims.

The final rejection stated that Junod's hand detector must communicate with the RF circuit to cause it to "wake up," and therefore the hand detector must be capable of sending RF signals otherwise the RF circuit would not be able to identify the wake-up signal. See Final Office action, pp. 2-3. In the advisory action, the Examiner alleged that because the antenna is used for both transmitting signals in a normal operating mode and for detection of a hand when in a low power mode, the "antenna is used to detect a characteristic, i.e. capacitance, of the same channel used for communication during normal operating mode meaning that the detection unit detects a characteristic of this channel." The Examiner's Answer now alleges that the antenna 144 is a radio channel, and that the capacitance of the antenna is a physical characteristic of a radio channel. This new position is clearly erroneous.

There exists no rational basis for the Examiner's interpretation of an antenna as constituting a radio channel. The only reason put forth for this construction is the assertion that the claim "does not require the detection of RF signals." Regardless of whether this is true, the alleged breadth of the claim does not permit the Examiner to construe claim terms in an arbitrary and capricious manner as the Examiner has done here. The Examiner has failed to show that construing an antenna as a radio channel is consistent with the specification or is common in the art.

Contrary to the Examiner's allegation, the term "radio" itself means the transmission through space of electromagnetic waves at well-known predefined frequencies. Claim 1 sets forth a radio communication unit for transmitting over a radio channel collected data. Thus, the radio channel is the medium over which a radio wave is propagated. An antenna, on the other hand, is a device that converts electric currents into electromagnetic waves and vice versa. Clearly, the antenna does not propagate the radio wave from a source to a destination as does a radio channel, but instead the

electromagnetic wave is created only as it leaves the antenna to travel over the radio channel, or carrier frequency.

Further, the Examiner's new interpretation of the antenna as constituting the radio channel is irreconcilable and inconsistent with claim 2, which requires that the radio channel sensor senses the physical characteristic of the radio channel by means of at least one antenna. The Examiner's Answer fails to explain how the antenna would sense a physical characteristic of itself under the Examiner's new interpretation.

Even if, *arguendo*, the antenna were to be considered a "radio channel" (which it is clearly not as demonstrated above), it would not be a "radio channel" when its capacitance is being sensed as in Junod. The relevant requirement of claim 1 is that in the low-power mode a physical characteristic of a radio channel is sensed and, if it meets a pre-set threshold, a normal mode of operation is entered. The Examiner has equated Junod's sleep mode to the low-power mode of claim 1. In this sleep mode the RF circuit 128 is disconnected from the capacitive antenna 124 of Fig. 7 by switch 130. Therefore, even if the antenna were to be considered a radio channel as alleged, at the time that the capacitance of the antenna is being sensed, i.e. in the sleep mode, the antenna is not acting as a radio channel and thus a physical characteristic of a radio channel is not being sensed.

The Examiner's Answer further argues that Junod's RF circuit 128 and hand detect circuit 126 are "coupled" as required by claim 1. As shown in Fig. 7, however, the RF circuit and the hand detect circuit are in fact decoupled by the switch 130. Thus, either the RF circuit is operational, or the hand detect circuit is operational, and one does not operate in dependence on the other. Thus, the argument that these components are "coupled" as claimed is erroneous.

Further, the Examiner's Answer is inconsistent in equating the components of Junod with the claim limitations. Junod states in paragraph 0050 that the circuitry comprising RF circuit 128 is illustrated in Fig. 8. Thus, the capacitive antenna 144 is inside the RF circuit and thus considered part of the RF circuit and not a radio channel.

Finally, those of ordinary skill in the art would understand that the phrase “transmitting over a radio channel” as used in claim 1 means to propagate an electromagnetic wave of radio frequency through the airwaves. Therefore, the Examiner’s Answer is incorrect in concluding that claim 1 does not implicate the transmission of RF waves.

### **CONCLUSION**

For the foregoing reasons as well as the reasons stated in the main brief on appeal, claims 1-20 are submitted to be directed to a new and unobvious radio-capable device with low-power and normal operating modes, which is not taught by the prior art.

The Honorable Board is respectfully requested to reverse all grounds of rejection and to direct the passage of this application to issue.

Please charge any fee or credit any overpayment pursuant to 37 CFR 1.16 or 1.17 to Novak Druce Deposit Account No. 14-1437.

Respectfully submitted,

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